

FIG. 4A

FIG. 4B

FIG. 4

	IMAGE DATA IMAGE DATA	IMAGE DATA LINE 3 IMAGE DATA LINE 4		IMAGE DATA LINE 49 IMAGE DATA LINE 50		CEPA VALUE REGISTER	
ELEMENT S	(S) (S)	(3) (B)	• • • • •	<b>400</b>	• • • • •	0	
ELEMENT R	(B)(B)	<b>D</b>	• • • • •	69	• • • • •	0	
ELEMENT Q	<u>5</u> (3)(3)	<b>(2)</b> (4)	• • • • •	69	• • • • •	(0)	
ELEMENT P		$\mathfrak{D}(\mathfrak{P})$	• • • • •	6)	• • • • •	(0)	
ELEMENT O	00	36	• • • • •	<b>4</b> 00	• • • • •	$\odot$	! [
ELEMENT N		33	• • • • •	<b>4</b> 00	• • • •	(D)	
ELEMENT M	SS	33	• • • • •	<b>4</b> 00	• • • • •	0	W;
ELEMENT L		(L) (4)	• • • • •	600	• • • • •	0	4
ELEMENT K	30		• • • • •	60		0	$\bar{\mathcal{C}}$
ELEMENT J	38	(2) (4)	• • • • •	<b>4 B</b>	• • • • •	0	H
ELEMENT I	30	(D)(4)		<b>4 B</b>		0	
ELEMENT H	DE	33	• • • • •	<b>4 B</b>		0	
ELEMENT G	<u>8</u>	(B) (B)		<b>E C C C C C C C C C C</b>	• • • • •	0	
ELEMENT F		(T) (T)		(g)	• • • • •	(3)	
ELEMENT E				64 (3)	• • • • •	(D)	
1 /	33	33	• • • • •	(2) (2)	• • • • •	0	
ELEMENT C	33	(3)(3)	• • • • •	<b>4)</b> (3)	• • • • •	(1)	
ELEMENT B	(B) (B)			(2) (4)	• • • • •	(7)	İ
ELEMENT A	©E	90	• • • •	<b>(9)</b>		0	

EG. 50 IT LINE IMAGE

EG. 2-BIT CEPA (m=2) #STEPS=2<sup>m</sup> #STEPS=4

LINE 1	LINE 2 LINE 3	LINE 4 LINE 5	TINE 6	LINE 49	LINE 50	LINE 52 LINE 53	
DATA	DATA DATA	DATA DATA	DATA	CEPA DATA	DATA DATA	_	
CEPA	СЕРА СЕРА	CEPA	SO CEPA	{CEPA	CEPA CEPA	СЕРА СЕРА	_
	88	<b>(2)</b>	(S) · ·	··· <u>(4)</u>	<b>B</b> (0	(0)	
····· (0)	9		$\textcircled{2} \cdots$	$\cdots \textcircled{9}$	<b>6</b>	)(0)(0)	
	99	88	<b>3</b> · ·	$\cdots \textcircled{2}$	6	)(B)(O)	
		33		$\cdots \textcircled{2}$	47 48 48 49	<b>(3)(0)</b>	
		0		···		49 49 50 50 50 0	<u>.</u>
			$\odot \cdots$	···( <del>b)</del>	<b>4 6</b>	<b>(4)</b>	
	99	<b>BB</b>	<b>3</b> · ·	···( <del>4</del>	<b>B</b> (0	$X \otimes X \otimes$	<b>F</b> #
				48	<b>6</b> 6		LCK
0		<b>QQ</b>	<b>3</b> · · ·	···( <del>2</del> )	(4) (4) (6)	)(D)(O)	FIG
		93	(E) · · ·	··· (48)	<b>6</b> 00		
	99	<b>4</b> (3)	9	··· (4)	(B)(0		
	<b>BB</b>	(E)(E)	$\mathfrak{D}\cdots$	$\cdots \begin{pmatrix} 4 \\ 8 \end{pmatrix}$	(4) (2)		
(0)	(0)(3)	88	( <u>3</u> )···	(4)	(4) (4)	(B)(e)	
	(0)(1)		( <u>4</u> )···	(2)	( <del>4</del> )( <del>4</del> )	)(B)(e)	
6	(0)(0)			(4)	4 6	<b>P</b>	
6	(0)(0)			(4)	( <del>2</del> ) ( <del>2</del> )	130	
6	(0)(0)	(E)(E)	(3) · ·	(9)	(4) (4) (2)	(2) (3)	
6	(0)(0)	(B) (B)	<b>3</b> · ·	(4)	( <del>4</del> )( <del>6</del> )	(4)(B)	
(0)	(0)(0)	(a)(a)	(2)···	(9)	(4)(4)	(4)(B)	_
					1		<del>;                                    </del>

EG. CEPA OUTPUT IT LENGTH +(2<sup>m</sup> -1) 50 + 3=53 53 IT LINE IMAGE

FIG. 5B	FIG. 5D
FIG. 5A	FIG. 5C

FIG. 5

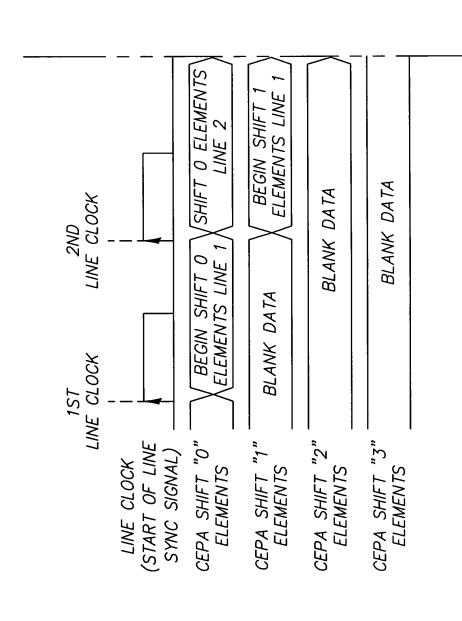
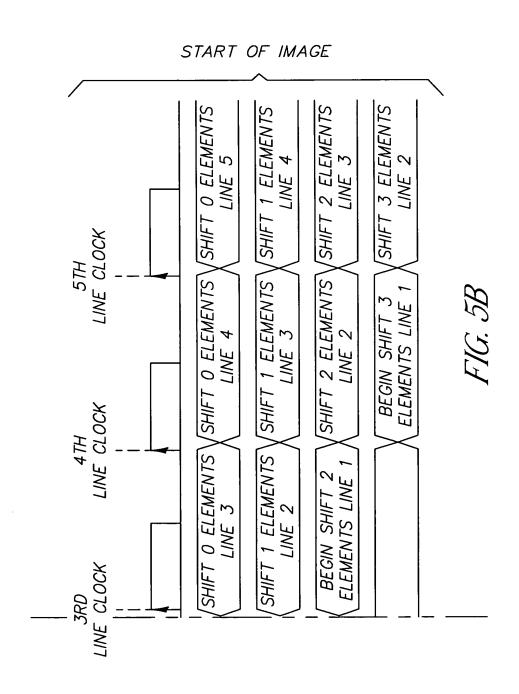


FIG. 54



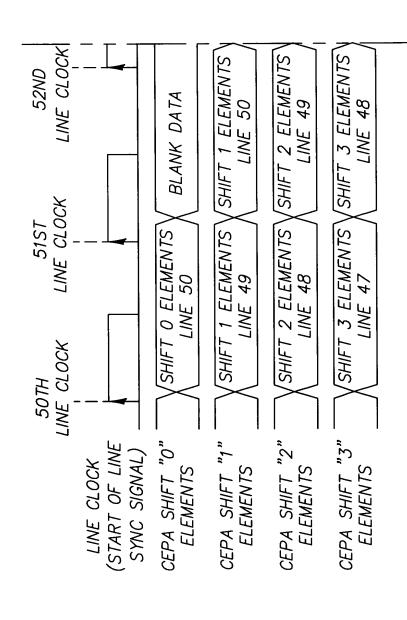
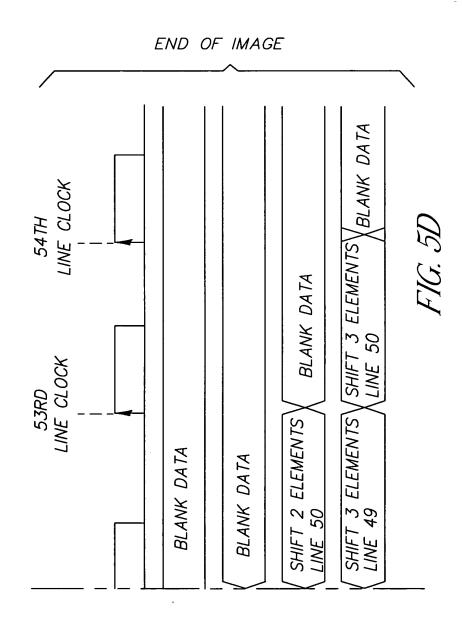


FIG. 5C



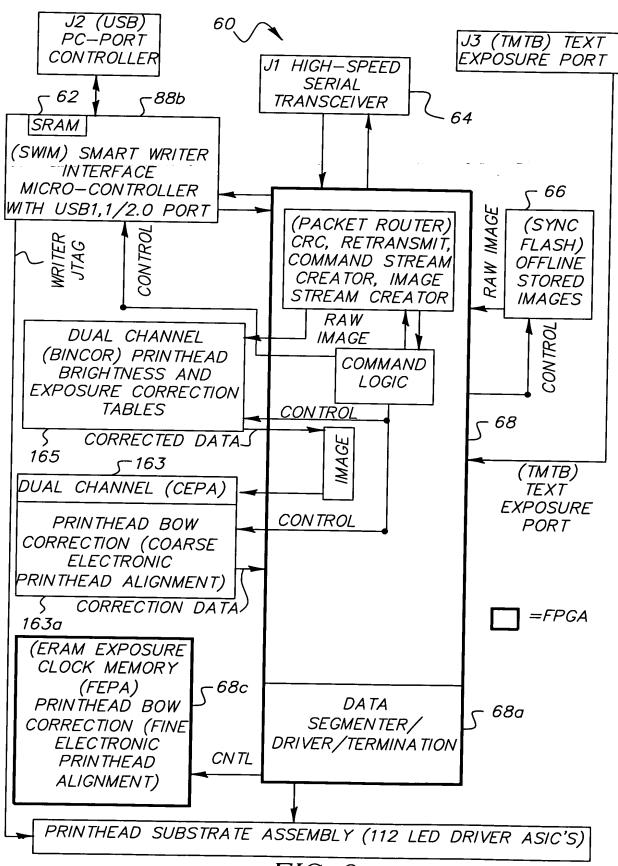


FIG. 6

	ŽΝ	MZ		L ET <del>V</del>	7		4	M	V/4				
	3	W/S	ノ	<b>∀</b> 73	מן		7	1	M				
	Z	M		13	٤		1	M	包		-	•	
	到	NNZ	3/1	1. 1273	g	-	氢	χ	Z,				
	1/2	MZ			<u></u>		1	W,	2	1		•	_
_ (	亳	× KŠ		.L ETV	a		<b>Ž</b>	ΛΛΥ				-	FIG.
_73~	NZ	W.			-	<u>,</u>	1/2	W.	<del>]  </del>	1		•	$\mathcal{C}$
	Z)		7	.L ETY	2 a	No.	*	ZY.	7				7
•	4	M	1				7	7	+1	11	M		
	¥ X	*	<b>E</b>	) L   ET	a			i	K	<u>,</u>	Ž,		
•	1	ML					$\dashv$	+	N	M	L L		
	3	XX	<u> </u>	) E T V	a				到是	×	Z	$\neg$	
	71	M			_		$\dashv$	7	W				7
	N.	\ \times	. 1	<b>ЕГ</b> Ч	0			耄		4		<u> </u>	
•	7	M.				-	1	4	W	4			
	3	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u>ا</u> ر ک	L 130	$\frac{\iota}{\sigma}$		***************************************	<u> </u>	<del> </del>				
-	7	M				<u> </u>		4	47	4			
	0.0	0.2	O	4 [		EG. WITH 2-BIT (OT	-0.0 /	)		1.0	<b>.</b> .		
		5) [	$DCLK_{\tau} = (0.25)P_{IT}$	<i>4 DELAY LEVELS</i> <i>T=1DCLK DELAY</i>	} !'	T IM			~	ノ			
C	, ל ה	<i>i</i> 2	, =	とと	70 37)	H	ĿΝ	Š	•	, ר	Ŋ		
St.	S W W	FE	0	DE FE	37)	7-5	15	15	; Þ		)		
SPACING	IT EXPOSURE	A	25)/	L K	į	3/7	5	ACURACY: 4	PLACEMENI	CO. CLEMENI	ן ה		
. Ø. ≤	NSC DSC	A	ם , ד	√ ს	)	(0)	TA	) ;;   	î î N	֓֞֝֓֓֓֓֓֓֓֓֓֓֟֝֓֓֓֓֓֓֓֓֟֝֓֓֓֓֓֓֓֓֓֟֝֟֝֓֓֓֓֓֓	֝֝֟֝֝֟֝֝֟֝֝֟֝֝֟֝֓֓֓֓֓֓֓֓֓֓֓֡֟֝֓֓֓֓֓֓֓֡֓֡֓֡֓֡		
7 7	IT EXPOSURE PLANE RESULT 1	-0.25 EG. FEPA ALIGNED	-			1	CENIER SPACING	~	`	1 <	7		
	Δ		র্ন ন				()	)					

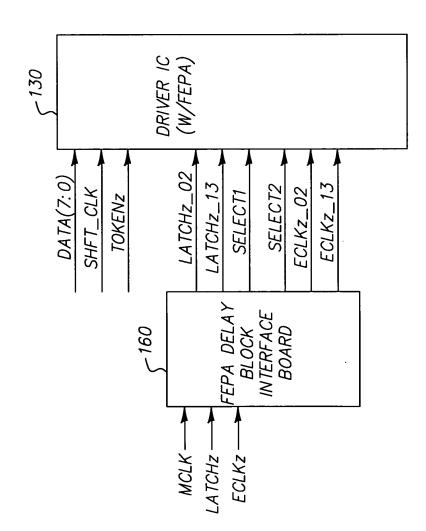
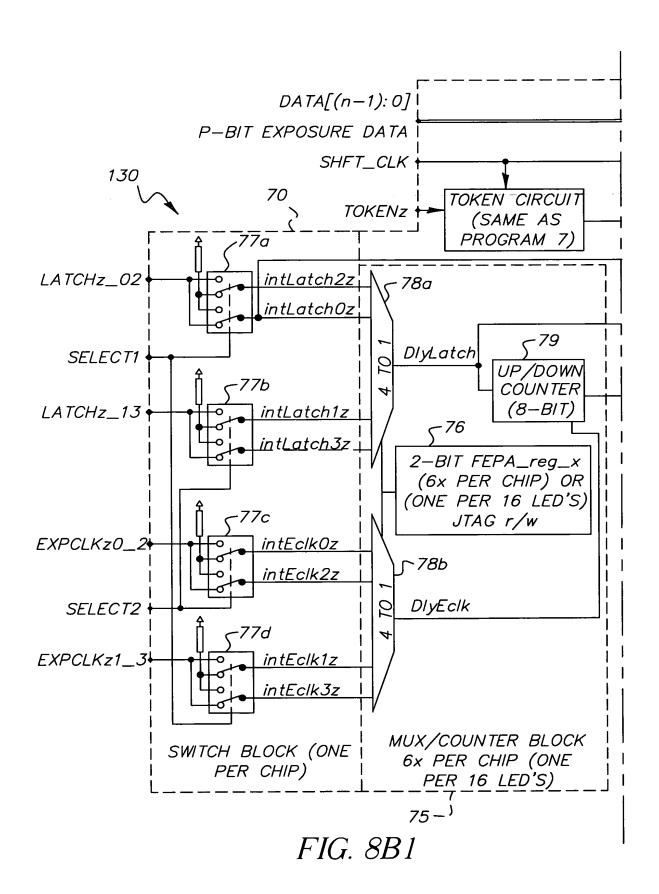


FIG. 8A

FIG. 8B1 FIG. 8B2

FIG. 8B



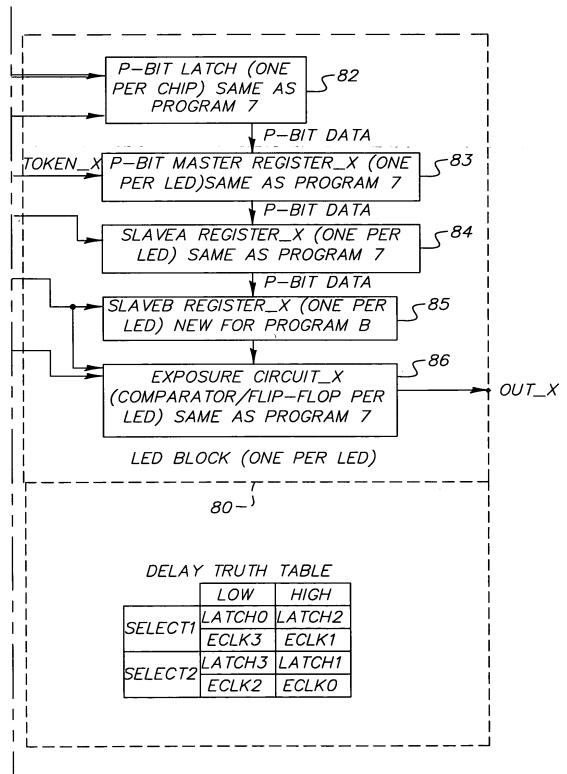


FIG. 8B2

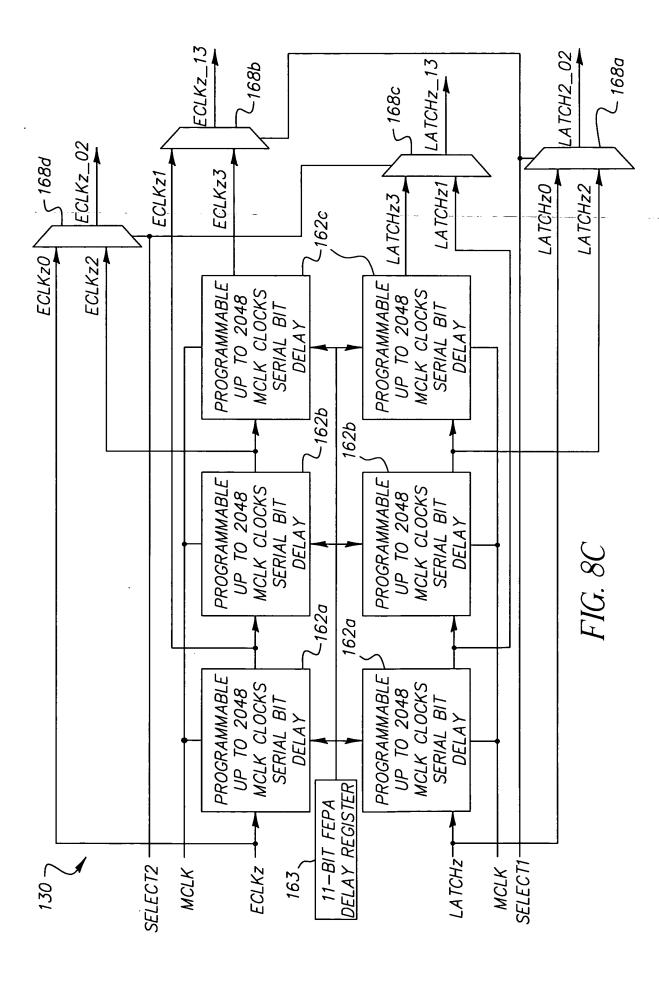
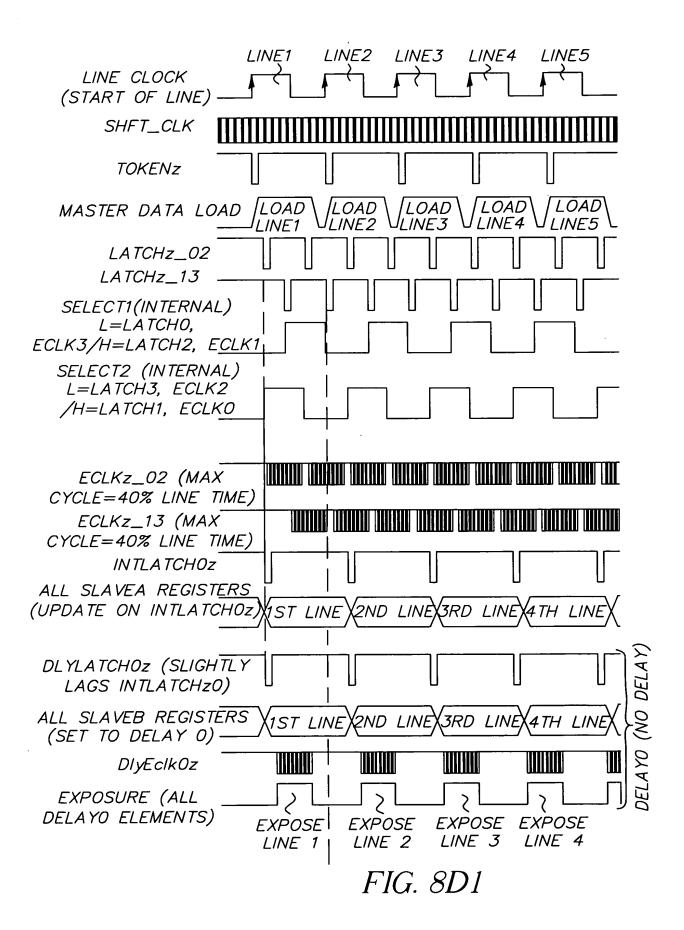


FIG. 8D1

FIG. 8D2

FIG. 8D



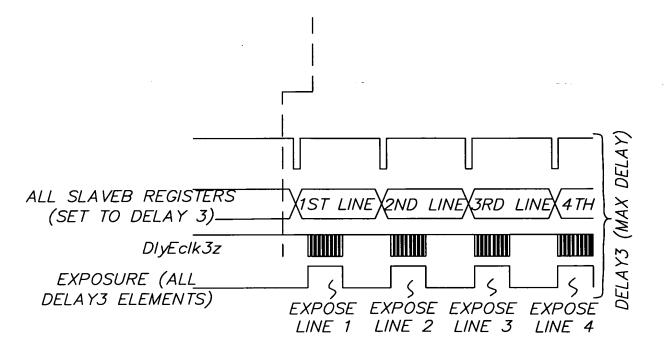


FIG. 8D2

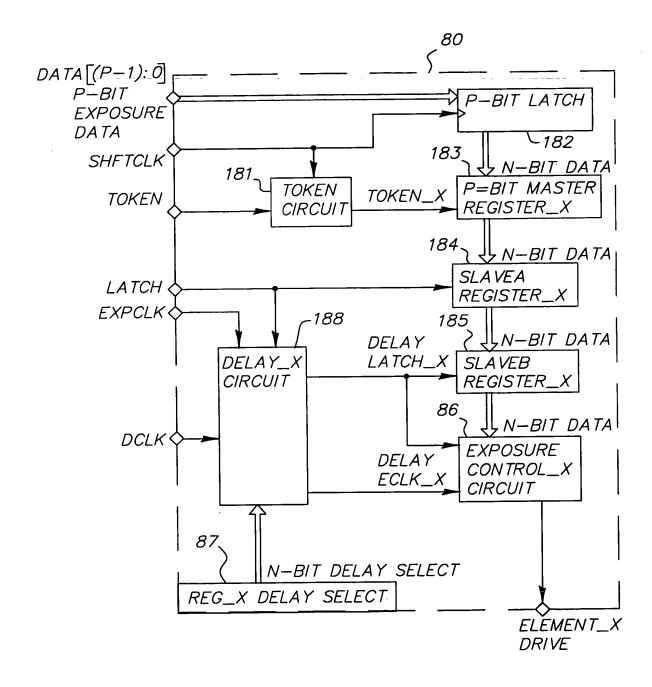


FIG. 9A

FIG. 9B1

FIG. 9B2

FIG. 9B

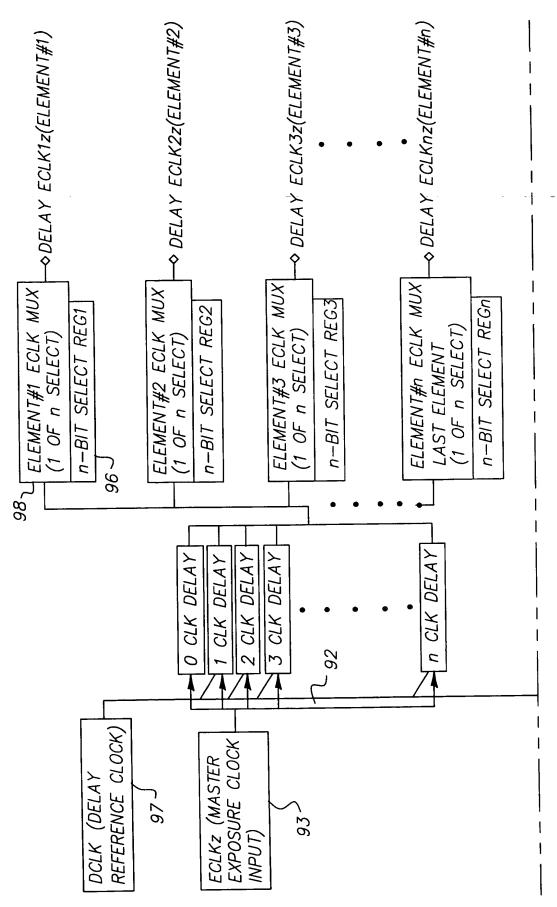


FIG. 9B1

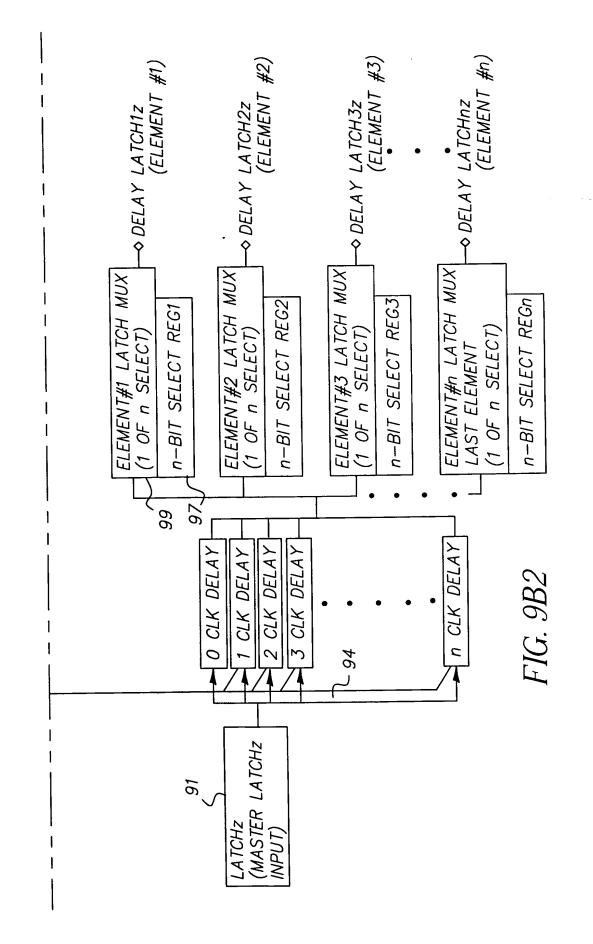


FIG. 10A

FIG. 10B

FIG. 10

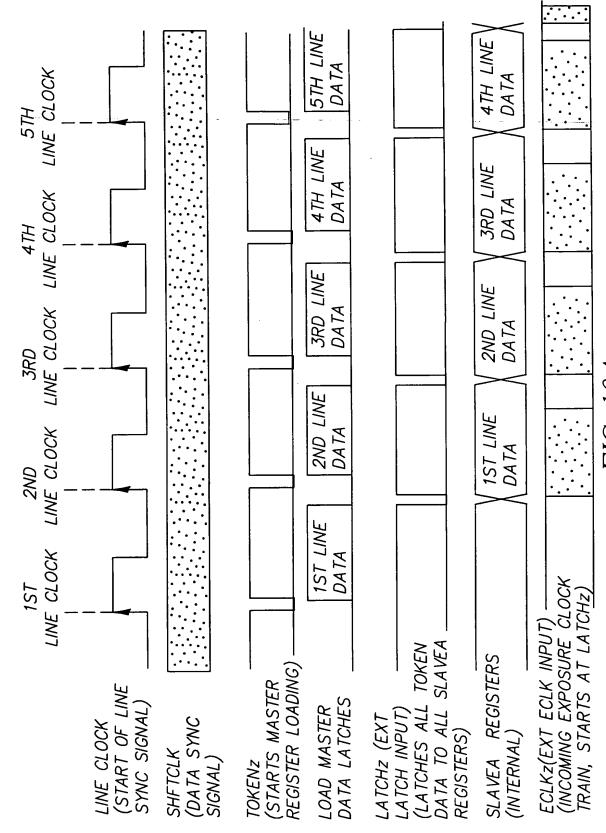


FIG. 10A

_		EXAMPLE DELA YED	EXAMPLE OF MAX  DELAYED ELEMENT					
					4TH			
	4TH LINE DATA		EXPOSE LINE 4		3RD LINE			
	3RD LINE DATA		EXPOSE LINE 3		2ND LINE			
	ZND LINE DATA		EXPOSE LINE 2		1ST LINE			
	ST LINE		EXPOSE LINE 1					
DELAY LATCHZ (ZERO DELAY)(LATCHES SLAVEA DATA TO SLAVEB REGISTER)	SLAVEB REGISTER (INTERNAL) (ELEMENTS W/ZFRO DFLAY)	DELAY ECLKZ (ZERO DELAY) (INTERNAL DELAYED EXPOSURE CLOCK)	ELEMENT EXPOSURE (ELEMENTS WITH ZERO DELAY)	DELAY LATCH_x (MAX DELAY) (XFERS SLAVEA DATA TO SLAVEB REGISTER)	SLAVEB REGISTER_X (INTERNAL) (ELEMENTS W/ MAX DELAY)	DELAY ECLKZ_x (MAX DELAY) (INTERNAL DELAYED EXPOSURE CLOCK)		

FIG. 10B

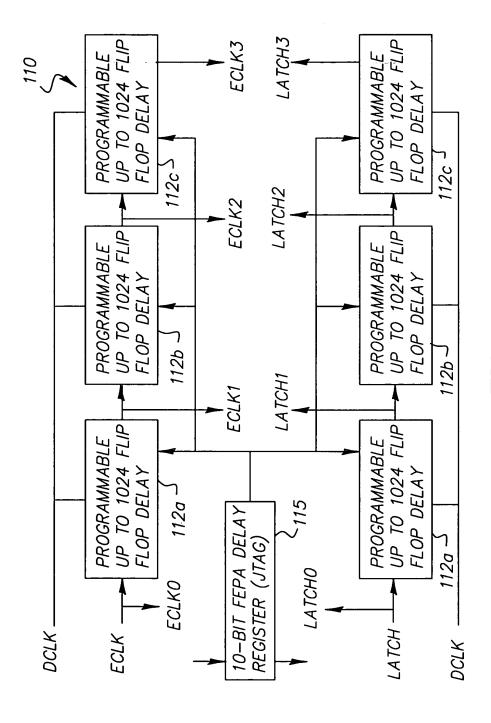


FIG. 11

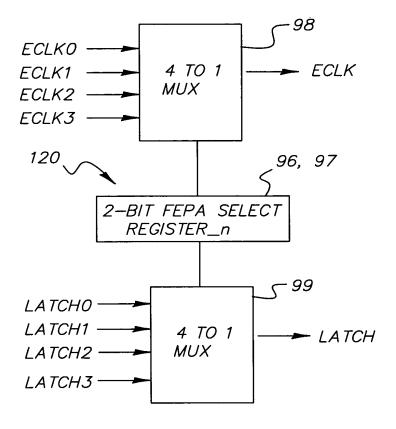
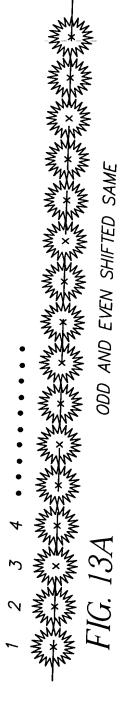
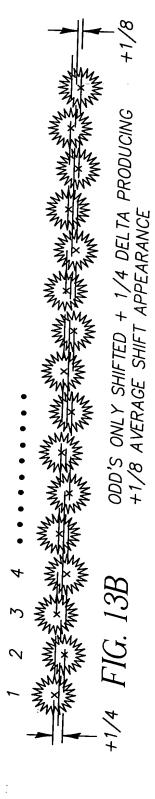


FIG. 12





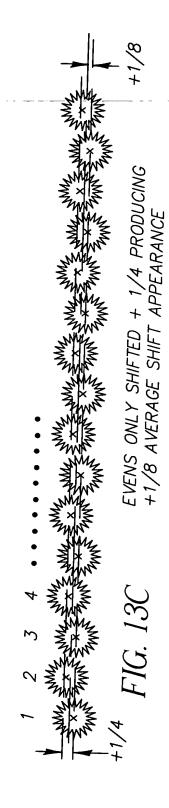
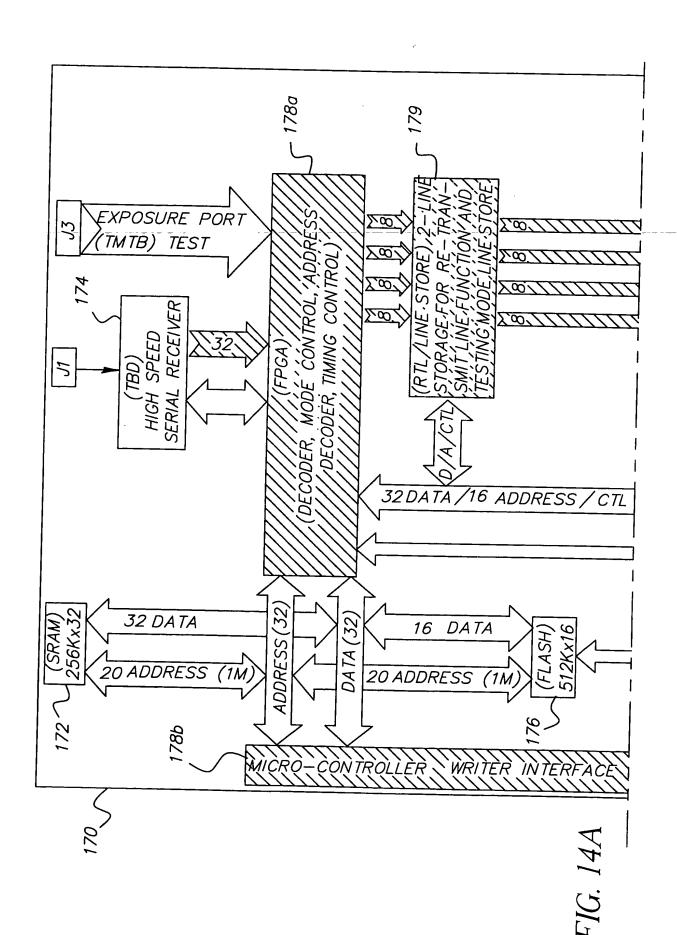


FIG. 14A

FIG. 14B

FIG. 14



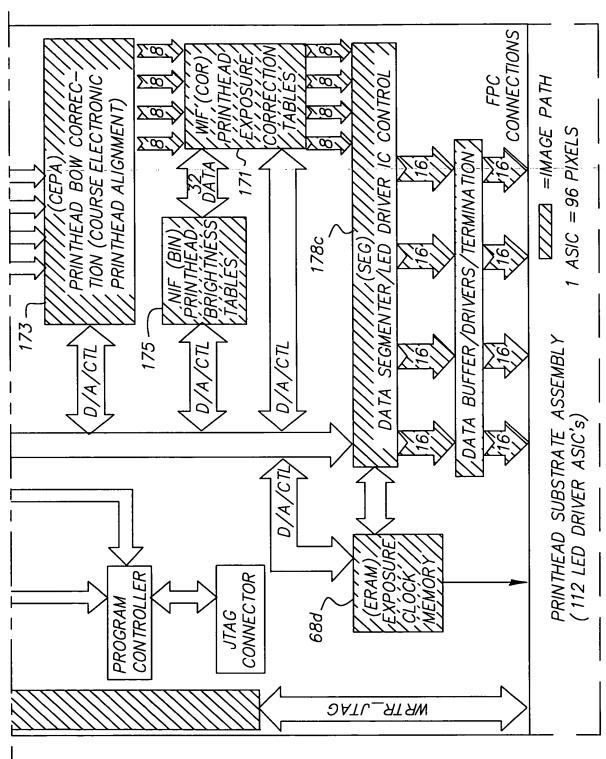


FIG. 14B